

Application No.: 10/561,862  
Filing Date: December 20, 2005

AMENDMENTS TO THE CLAIMS

Please amend Claims 1, 2, 6 and 7. Insertions are shown underlined while deletions are ~~struck-through~~.

1 (currently amended): A polyol composition for hard polyurethane foam, comprising at least a polyol compound, a blowing agent, a foam stabilizer and a catalyst, which is mixed with an isocyanate component containing a polyisocyanate compound, followed by foaming and curing to form a hard polyurethane foam, wherein

the blowing agent contains 1,1,1,3,3-pentafluoropropane (HFC-245fa) as a main component and further comprises at least one compatibilizer selected from the group consisting of N,N-dimethylacetamide (DMA), N-methyl-pyrrolidone (NMP)- $\gamma$ -butyrolactone (GBL) and methoxypropyl acetate (MPA), and 1,1,1,3,3-pentafluorobutane (HFC-365mfc), and also HFC-245fa/HFC-365mfc  $\geq$  60/40 (weight ratio) and (HFC-245fa + HFC-365mfc)/(compatibilizer) = 95/5 to 60/40 (weight ratio).

2 (currently amended): A method for producing a hard polyurethane foam, which comprises the step of mixing an isocyanate component with a polyol composition, and foaming and curing the mixture to form a hard polyurethane foam, wherein

the polyol composition contains at least a polyol compound, a blowing agent, a foam stabilizer and a catalyst, and wherein

the blowing agent contains 1,1,1,3,3-pentafluoropropane (HFC-245fa) as a main component and further comprises at least one compatibilizer selected from the group consisting of N,N-dimethylacetamide (DMA), N-methyl-pyrrolidone (NMP)- $\gamma$ -butyrolactone (GBL) and methoxypropyl acetate (MPA), and 1,1,1,3,3-pentafluorobutane (HFC-365mfc), and also HFC-245fa/HFC-365mfc  $\geq$  60/40 (weight ratio) and (HFC-245fa + HFC-365mfc)/(compatibilizer) = 95/5 to 60/40 (weight ratio).

3 (previously presented): The polyol composition for hard polyurethane foam according to claim 1, wherein the polyol compound comprises at least one selected from the group

consisting of tertiary amino group-containing polyol compound, aliphatic polyol and aromatic polyol.

4 (previously presented): The polyol composition for hard polyurethane foam according to claim 3, wherein the tertiary amino group-containing polyol compound is a polyfunctional polyol compound obtained by ring-opening addition polymerization of one or more kinds selected from among alkylene oxide using a primary or secondary amine as an initiator.

5 (previously presented): The polyol composition for hard polyurethane foam according to claim 3, wherein the aliphatic polyol is a polyfunctional oligomer obtained by ring-opening addition polymerization of one or more kinds selected from among alkylene oxide using an aliphatic or alicyclic polyfunctional active hydrogen compound as a polyol initiator.

6 (currently amended): The polyol composition for hard polyurethane foam according to claim 3, wherein the aromatic polyol include a polyol compound obtained by adding the above an alkylene oxide to a polyfunctional active hydrogen compound having an aromatic ring in the molecule, and a polyol compound as an ester of an aromatic polycarboxylic acid and a polyhydric alcohol.

7 (currently amended): A polyol composition formulated for producing hard polyurethane foam, comprising:

- a polyol compound;
- a blowing agent;
- a foam stabilizer; and
- a catalyst,

wherein the blowing agent comprises:

- (i) 1,1,1,3,3-pentafluoropropane (HFC-245fa) as a main component; and
- (ii) at least one compatibilizer selected from the group consisting of N,N-dimethylacetamide (DMA), N-methyl pyrrolidone (NMP),  $\gamma$ -butyrolactone (GBL), methoxypropyl acetate (MPA), and 1,1,1,3,3-pentafluorobutane (HFC-365mfc),

wherein a weight ratio of HFC-245fa/HFC-365mfc is 60/40 or higher, and a weight ratio of (HFC-245fa + HFC-365mfc)/(the compatibilizer(s)) is 95/5 to 60/40.

8 (previously presented): The polyol composition according to claim 7, further comprising an isocyanate component containing a polyisocyanate compound.

9 (previously presented): The polyol composition according to claim 7, wherein the polyol compound comprises at least one selected from the group consisting of tertiary amino group-containing polyol compound, aliphatic polyol, and aromatic polyol.

10 (previously presented): The polyol composition according to claim 9, wherein the tertiary amino group-containing polyol compound is a polyfunctional polyol compound obtained by ring-opening addition polymerization of one or more kinds of alkylene oxides each using a primary or secondary amine as an initiator.

11 (previously presented): The polyol composition according to claim 9, wherein the aliphatic polyol is a polyfunctional oligomer obtained by ring-opening addition polymerization of one or more kinds of alkylene oxides each using an aliphatic or alicyclic polyfunctional active hydrogen compound as a polyol initiator.

12 (previously presented): The polyol composition according to claim 9, wherein the aromatic polyol is (i) a polyol compound obtained by adding one or more kinds of alkylene oxides each using an aliphatic or alicyclic polyfunctional active hydrogen compound as a polyol initiator, to a polyfunctional active hydrogen compound having an aromatic ring in its molecule, or (ii) a polyol compound as an ester of an aromatic polycarboxylic acid and a polyhydric alcohol.

13 (previously presented): A method of producing hard polyurethane foam, comprising the steps of:

providing the polyol composition of claim 7;  
mixing an isocyanate component with the polyol composition to obtain a mixture;  
and  
foaming and curing the mixture to form hard polyurethane foam.

14 (previously presented): The method according to claim 13, wherein the isocyanate component is mixed at an equivalent ratio NCO/OH of approximately 1.70.

15 (previously presented): The method according to claim 13, wherein when the isocyanate component is mixed, a temperature of the polyol composition is controlled at approximately 20°C.